JANUARY 1955

FIREMEN

FIFTY-NINTH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

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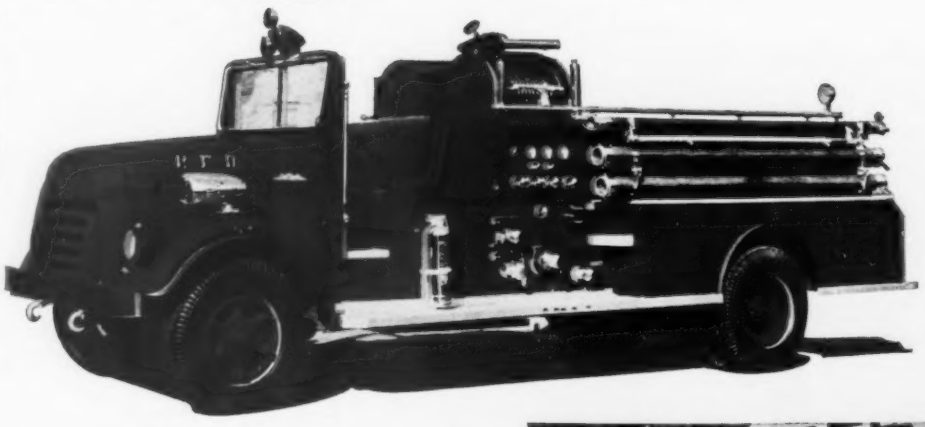

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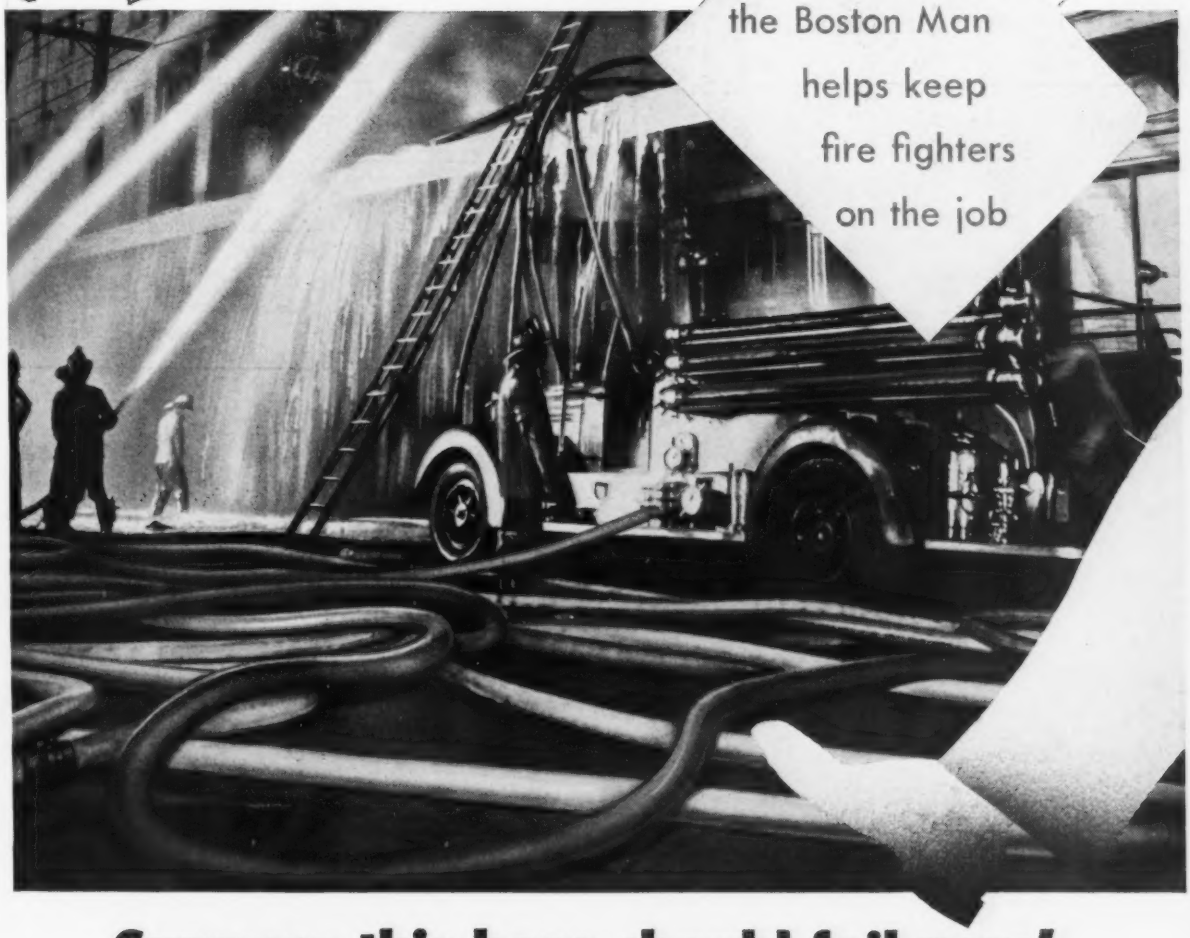

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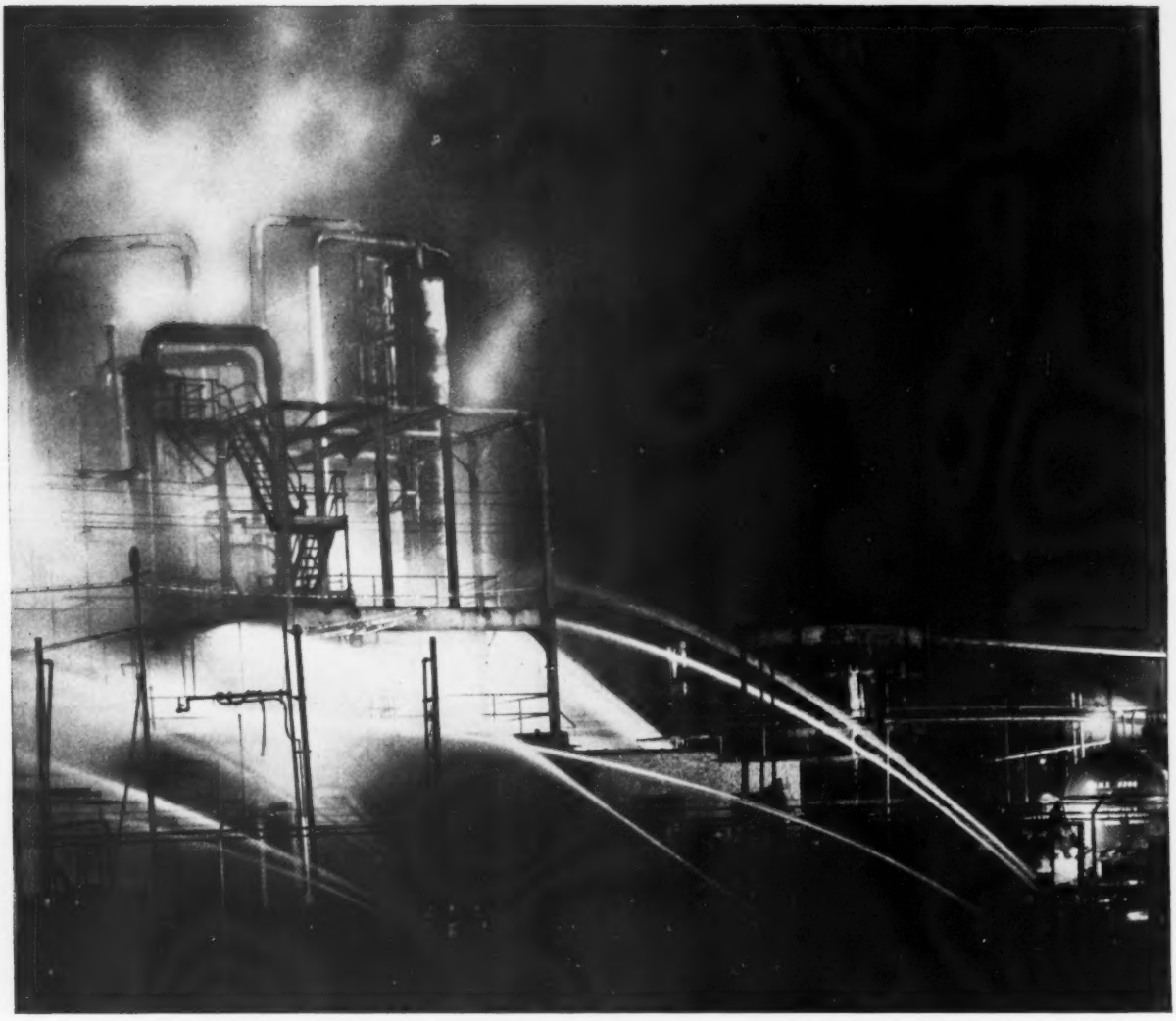

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Firemen

Volume 22 — Number 1

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On Discipline

Recently a fire fighter of a large municipal fire department voiced the complaint: "Now they're trying to push that 'spit and polish' stuff on us, and you know that's for the birds." He was objecting to the fact that fire officers in his department had started a "spruce up" campaign and were insisting on clean clothes and neat appearance for every member of the department.

Any good leader knows that discipline is only one more tool with which to accomplish a given task through united effort. To a fire officer, discipline is as necessary a piece of equipment as a nozzle or boots is to the man in the ranks. Good discipline is only used objectively and not as a weapon to frustrate the good intentions and deeds of an individual.

For many years similarities between fire fighting and military operations have been discussed. Fire fighters are civilian employees of municipalities and their service is under civil regulations rather than "articles of War." Nevertheless, in fire combat, the lives and success of the team is based upon mutual respect for discipline by both fire officer and fire fighter. Since there are so many similarities between the fire service and the military service, perhaps a classic example of the purpose and results of discipline may be taken from the recent Korean War. During the darkest days of that engagement, when the Allied Forces were being driven to the southernmost portion of the country, General Matthew Ridgway was appointed as commander of the Allied Forces. In the midst of the chaos and confusion and falling soldier-spirit that comes with withdrawal action, one of his first commands was for the soldiers in the line to "police" every area into which they moved. As the order passed down through the various lower commands, troops "griped to high heavens," but were soon picking up used cartridges, artillery ammunition cannisters, stray equipment and the general rubbish which generally accumulates in military disorganization. There is no measuring how much this simple exercise of discipline affected the tide of battle, but shortly afterward, unity was achieved in the Allied Forces, they braced, and soon the tide of battle was moving northward again.

Similarly, "spit and polish" in the fire station serves a far better purpose than just making the men and quarters attractive. The simple chore of polishing chrome to its best brilliance requires fundamental diligence and attention to detail, which frequently uncovers the need for essential repairs and adjustments which can avert breakdowns. Such attention to detail is absolutely essential to one who aspires to leadership in any occupation. "Policing" serves the same purpose for the combat soldier. Human weaknesses and strengths which are tested in emergencies are crystallized through a complex series of habits which the individual develops in daily living. In order for any organized group, such as the fire or military service, to develop unity of action its members many times must sacrifice their personal desires to the unified desire, or for the safety, of the group. The history of the fire service, as well as the military, is replete with incidents of individuals making the supreme sacrifice of life, in order that others may survive a particular ordeal.

The acceptance of discipline requires humility. Yet, as the patterns of habit essential to the profession are developed, that discipline serves as a safeguard which oftentimes means the well-being and preservation of the individual in times of emergency. For the fire fighter, his department's methods of handling hose, ladders and other equipment become a standard form of discipline. Wearing gas masks is another form of discipline. And when a 5th alarmer or a large-scale mutual aid problem is in operation, even the movement or placement of apparatus depends upon a pattern of discipline which follows throughout the chain of command. And its scope of success depends upon how each man in the operation responds to the toughest discipline of all — the discipline of one's self.

Cover Picture

A typical winter fire is shown on this month's cover (Wide World Photo) which pictures the Johnson City, New Jersey, Fire Department in action. On December 7 the department responded to heavily involved 3-story brick building containing business establishments and apartments. Loss was estimated in the vicinity of $500,000.

MAKING A GOOD JOB OF IT

BY WARREN Y. KIMBALL

Friction Loss in Small Hose

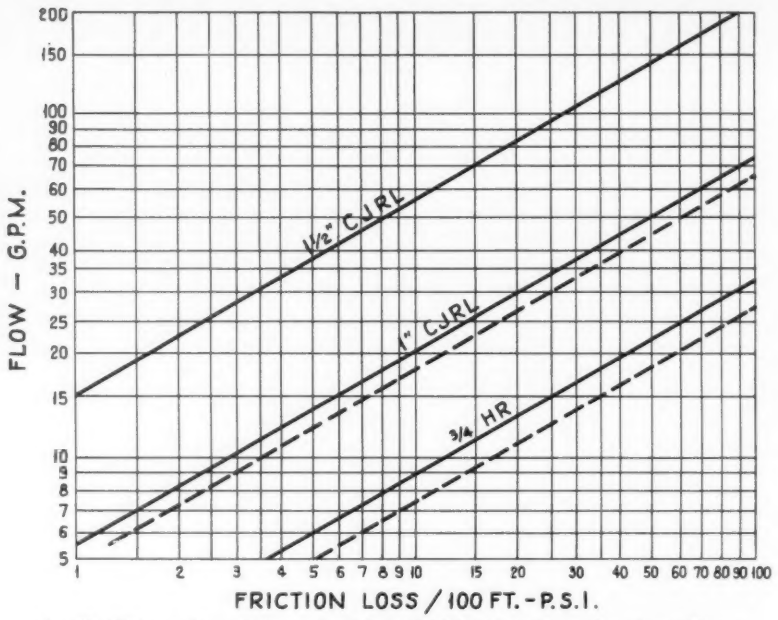
FOR some time it has been appreciated by fire officials and fire protection engineers that friction losses in small diameter fire hose have not been accurately represented by tables derived from formulae commonly used for calculating friction losses.

Accordingly, it is interesting to learn that the Arcadia Equipment Development Center of the U. S. Forest Service has published results of investigations of "Capacities of and Pressure Losses through Reeled and Unreeled Small-Diameter Hose." This equipment development report No. 28, dated October, 1954, covers investigations carried out to determine if it was feasible to use hose smaller than 1-in. on small pickup tankers. The report shows that pressure losses in small hose are substantially less than those shown in previously published tables. This should be of general interest to any fire department or other agencies using small diameter hose.

It was further demonstrated in the report that pressure losses in reeled hose averaged 21 percent greater at a given flow than when hose was unreeled and laid straight.

In addition, experiments were made with pressure gages attached to hypodermic needles to determine proper placement of the needles for test readings. The report stated: "no difference in readings with regard to position were noted."

Hose tested was of the following ID; ⅜-, 7/16-, ½-, ¾-, 1- and 1½-in. Types of hose construction tested included small diameter hard rubber high pressure hose (600 lbs.) in sizes from ⅜- to ¾-in.; ¾-in. linen hose; 1- and ½-in. cotton rubber-lined hose; and ½-in. plastic garden hose. The latter hose expanded and contracted with differences in temperature as well as pressure.



Arcadia EDC report graph shows comparison of friction losses for various sizes of hose. The broken lines show pressure losses with hose reeled.

It was found that the smaller hose expanded under pressure which may account for the fact that friction losses tended to be below previously published figures for nominal hose sizes. The changes in diameter could not be measured consistently.

From information in the report supplemented by data from the NFPA Handbook of Fire Protection, we have prepared several new tables of pressure losses in small hose. The first compares the new friction loss figure obtained by the Arcadia experiments with previously published friction loss figures. The second shows the flows that may be obtained through lines of small hose of various lengths with 250 lbs. pump pressure and 100 lbs. nozzle pressure. All standard fire department pumps should be capable of providing the flows here listed at the desired pump pressure. It is interesting, for example, to note that with the pumper within 250 ft. of the fire, 1½-in. hose is capable of delivering 150 gpm at 100 lbs. nozzle pressure when the pump is operating at 250 lbs. At the same pump and nozzle pressure ¾-in.

(*Continued on page 22*)

Comparative Tables of Pressure Drop in PSI per 100 Ft. Hose

Hose Size (Inches)	Flow GPM	Pressure Loss (NFPA Handbook data)	Pressure Losses Based on Arcadia Tests	
			Hose Straight	Hose Reeled
⅜	2	—	18	—
	4	—	62	—
	6	—	130	—
7/16	3	—	17	20
	6	—	57	70
	9	—	124	195
½	5	—	22	30
	8	—	50	70
	11	—	85	120
¾	10	13.5	13	17
	20	50	41	60
	30	105	88	125
1	20	12.3	10	12
	40	44	35	40
	60	94	70	85
1½	25	2.6	2.5	—
	50	9.3	8	—
	75	19	17	—
	100	33	27	—
	125	—	40*	—

* Extended empirically

Fire Control Center in St. Mary's County*

SERVING the six volunteer fire companies of St. Mary's County, Maryland, is a new radio dispatching center located in Leonardtown. Installation of a "selective tone dispatching system" led to the dedication of this fire control center in August, 1954.

It has taken about four years for the fire companies in the County to become fully radio-equipped. Chief Benjamin Poindexter of the Lexington Park Fire Department started the change-over in 1950 when he obtained radio equipment for his apparatus. A year later the Leonardtown Fire Company also obtained radio equipment.

What spurred the acquisition of a centrally located radio control board, however, was the fact that the telephone service in the County was being changed to a dial system. This eliminated the old "individual call" system in which the telephone operator called fire company members or sounded house sirens.

A committee of the St. Mary's County Firemen's Association, namely Lloyd Goddard, Ben Poindexter, and Charles Rogers, investigated the possibilities of a control center and found them practical. Subsequent support was given to the Association by the County Commissioners and the County Civil Defense organization.

The control board, being in Leonardtown, is centrally located in the County. The radio equipment not only provides vocal communication between County Headquarters and each engine house, but also permits activation of each and every fire house siren by radio impulse. The General Electric selective tone dispatching system is manned 24 hours a day.

The six fire companies are, on the average, 14 miles apart. Creek and inlets which punctuate the shore lines of the County pose a special problem for the dispatcher. He must be certain of the location of fires in relation to such water obstacles, since if response of apparatus is directed incorrectly, a fire company could respond to within 100 to 300 feet of a fire site, only to be separated from it by a body of water.

(Left) Map of St. Mary's County showing location of volunteer fire departments. Note the numerous inlets and coastline irregularities, which are apt to make fire apparatus response difficult. St. Mary's City, (near Ridge on the southern portion of the County) was the Capitol of Maryland during Colonial times.

Dispatch desk of the new control center. Police radio equipment is at left, fire department's selective tone equipment is at right. Detailed maps on wall above aid dispatcher in spotting fire or alarm location.

Call letters for the new station are KGD 270. It serves the volunteer fire companies of Leonardtown, Lexington Park, McKay's Beach, Mechanicsville, Seventh District and Ridge.

Present at the dedication ceremonies in August were Colonel Elmer F. Munshower, Superintendent, Maryland State Police; Shirley Ewing, State Director of Civil Defense; Robert C. Byrus, Director, Fire Service Extension, University of Maryland; State Senator Paul J. Bailey; Colonel Roland Duke; County Commissioners Byron Guy, Ernest Stone, and Leonard Alvey; Chief Poindexter of Lexington Park, Bill Holley of Leonardtown, and James Raley of Seventh District Fire Department.

Fire station and apparatus of the Lexington Park Volunteer Fire Department, one of the six departments in St. Mary's County which is served by the new radio control center.

*From a report by Robert J. Smith, Maryland State Firemen's Association.

San Francisco's Fireboat "Phoenix"

By Kenneth R. MacDonald

FIRE protection for the waterfront and harbor facilities of San Francisco, California, is now being provided by the new 80-ton Diesel powered fireboat *Phoenix*. The compact vessel was launched last year after the two old fireboats *David Scannell* and *Dennis T. Sullivan* were retired from duty. The new craft is the first to be built in San Francisco since 1909.

Total construction cost of the *Phoenix* was $392,000. Designing was by Boston naval architect John G. Alden, who was commissioned for the task after the California State Board of Harbor Commissioners made a nationwide study of fireboats and fireboat operating costs.

Operation of the fireboat is under the jurisdiction of the Harbor Commission. Fuel, supplies and maintenance costs for the *Phoenix* are expected to average $345 a month and the Commission believes that the *Phoenix* can be operated for $188,000 a year, including all costs.

This would compare with a $400,000 annual cost for each of the last three years in which the other steam-powered fireboats, named above, were operated.

The new fireboat has a displacement of 126 tons and is powered by three 550 hp and two 110 hp Cummins Diesel engines. Overall length is 88 feet 8½ inches (85 feet at the water line). Her beam is 19 feet 4 inches, and designed draft is 5 feet 11 inches.

"Push-button" operation provides control of the Diesel engines from the pilot house or engine room, through an air-actuated control system which includes starting speed for propulsion and pumping, or for switching engines from propulsion to pumping operation or back.

San Francisco's new fireboat *Phoenix* is built of all welded steel and was launched in March, 1954, at the Alameda Yards at the Plant Ship Yard Corporation.

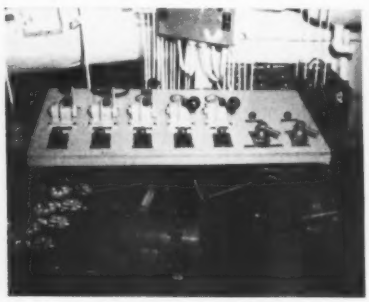
Full front power take-offs and flexible couplings connect the main engines to the DeLaval fire pumps. The third 550 hp diesel is coupled directly to the forward fire pump. When the three DeLaval pumps are in operation, the fireboat has a capacity of 9,600 gpm at 150 lbs. pressure. The two 110 hp Diesel engines operate to counteract the thrust effect of this pumping.

The three main pumps are each two-stage centrifugal pumps of 3,200 gpm capacity. Eight-inch risers from these pumps connect to a 10-in. main loop which supplies four-deck monitor guns and a deck manifold. The monitor on the pilot house has a capacity of 3,000 gpm while each of the other three monitors on the forecastle, the elevating tower, and the stern has a capacity of 2,000 gpm.

A foam system is also included and has two 250-gallon tanks with a foam capacity of 165 thousand cubic feet. The forward pump discharges foam through the forecastle monitor gun and four hose outlets. Carbon dioxide is also available for fire extinguishment.

The fireboat can also be used to provide water for San Francisco's high-pressure mains. An outlet located near the deck manifold allows connection to the city's high-pressure main and 3,200 gpm can be supplied at 330 lbs. pressure. Normal operating speed on the pumps is 1,875 rpm but this is increased to 1,935 rpm for high-pressure service.

The wheel house control board equipped with an air actuated power system duplicates the control board in the engine room.



Engine room control board affords alternate control system for pump operation.

One of the 550 hp, 12-cylinder propulsion-pumping engines in the *Phoenix*.

Philadelphia Safety Conference

THE Philadelphia Safety Conference is scheduled to be held at the Broadwood Hotel at Philadelphia, Pa., March 8 and 9. It will include a session sponsored by the Keystone Fire Chiefs Association at 2:30 P.M. on March 8. Former Chief Paul P. Heinz of New Haven will be the principle speaker.

Fire Department Instructors' Conference
Memphis, Tennessee
February 22–26, 1955

Standardized Fire Department Maps

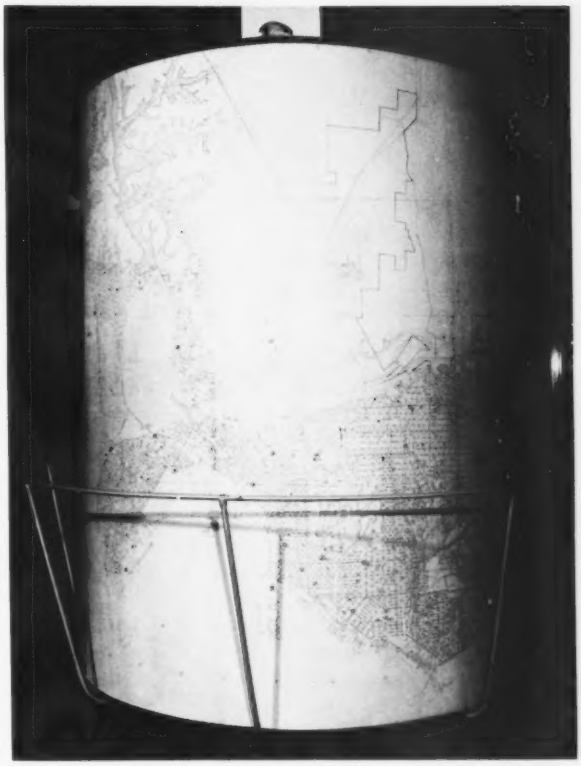
By Battalion Chief Gordon E. Browne, Drillmaster, San Diego, California, Fire Department

FOR many years, the San Diego Fire Department operated from district maps in all fire stations. Prior to 1943, these district maps were drawn by various personnel for their respective fire stations. The maps varied as to scale and detail. However, all maps included existing streets, block numbers, and fire hydrant locations.

The Central Fire Alarm office was operating with a one inch-to-400 foot scale sectional map, mounted on swinging sheets of plywood. All details were complete; streets, street numbers, canyons, and fire alarm box code numbers.

World War II was in its third year. Defense plants, military establishments, and new housing units were growing day by day. City topography rapidly changed with these new developments. New streets, fire hydrants, and fire fighting facilities progressed with this swift expansion. It was evident that our existing maps, without complete revision, would soon be obsolete and incapable of accommodating our expanding city limits. To meet this need for a complete map revision program, Chief George E. Courser assigned qualified personnel to draw an accurate scale map of the city of San Diego, especially designed for fire suppression activities.

This map was drawn on vellum cloth, and required three years to complete. Duplicate maps were then printed from the "master" map by the dry print or Ozalid process, in sufficient quantity to provide one for each fire station and the Central Fire Alarm Office. Maps in fire stations are now mounted directly on walls near telephones and alarm receiving equipment. The Central Alarm Office map is mounted on a revolving galvanized steel drum, six feet in diameter by eight feet in height. Alnico magnets, $\frac{3}{8}$-in. in diameter, were purchased for identification of Chief Officers' cars, fire apparatus, and other mobile equipment. Such magnetized identification symbols enable apparatus move-ups and equipment shifts to be indicated accurately at the time they occur during any emergency. Fire alarm operators can immediately determine the status of the fire protection equipment over the entire city.



Map in San Diego's Central Alarm Office is mounted on a revolving steel drum which is six feet in diameter. Keeping up with the changes in the city's streets and occupancies requires labor equivalent to three men each working a 40-hour week.

Close-up of a section of the "master" map, showing use of magnetized symbols for identifying locations of officers' cars and fire companies.

After mounting the maps, the main thoroughfares or fire lanes were painted yellow, schools green, and fire stations red. Fire hydrants were designated by blue dots, the same color as the lettering on street names, street numbers, and canyon lines. One-inch black masking tape formed the finished border for the maps, each of which was finished with two spray coats of clear lacquer. Street index guides were printed and furnished with each map.

The entire project, from start to finish, was accomplished by personnel within the department. Maintenance of the master or original map drawings require approximately 120 man hours weekly, because the city is still expanding. Maintenance includes revision of master vellums and printing of small area maps where topographical changes have occurred. These small area maps are pasted on the large map to keep existing fire station maps up to date.

This year the department will complete and place in service book maps, identical to existing wall maps, for all Chief Officers' cars, fire apparatus, fire alarm

(*Continued on page 26*)

Let's Have Line Officers Standards

By Chief Millard L. Rogers, Brewerton, New York, Volunteer Fire Department.

Chief Rogers has been a member of the Brewerton Volunteer Fire Department for 23 years and has served as chief during the past 3 years. Formerly he was an Assistant Professor, College of Liberal Arts, Syracuse University. In this article he outlines an officer selection problem of particular concern to volunteer fire departments.

THE development of an ever-increasing number of volunteer fire departments has been rapid since the end of World War II. Hundreds of new departments have been organized from coast to coast. Marked improvements have been made in fire fighting equipment and methods and techniques of fire fighting have greatly improved.

But the area of greatest achievement is in the education of fire fighters. Practically every volunteer department in our nation is engaged in some program of fireman education and training. Many states at present are sponsoring state fire schools. (*See* FIREMEN *for December, 1954 — Ed.*) These educational programs are producing volunteer firemen skilled in techniques based on sound theory. The result is a nation-wide fire combating force never before equaled.

However, in spite of many improvements one phase of the volunteer service has not kept pace. Some departments still have untrained, poorly prepared and inexperienced line officers. It is a common practice of volunteer departments to annually elect their line officers. The result is that many men are elevated to officer rank in terms of popularity or personal appeal rather than on the basis of fitness.

Several months ago the writer was driving through a small rural community just as the fire alarm sounded. A farmhouse on village outskirts was burning. The local department quickly answered the call and a line was run from a pumper, spotted near the house, to a nearby creek. The engine crew charged the hose amazingly fast, but no water was put on the fire. The nozzleman did not know how to open the tip. After considerable delay, one man called out for help, asking instructions as to how to open the nozzle. The man who requested help was wearing the white hat and coat of the Chief of Department.

It should be a stringent rule of every department, that line officers should be able to operate, "trouble shoot," and give instruction on each piece of equipment his department posses. Until an individual can demonstrate his ability to fulfill these requirements he should not be considered officer material. A volunteer fire department line officer must be prepared to give leadership and direction for any emergencies his department may be called upon to meet.

But how do we get good line officers?

Partial answer to the problem lies in the establishment of line officer standards in terms of "fire fighting know-how." Requirements should vary according to local conditions and be designed to meet individual department needs. Qualifications should be specific, clear cut, reasonable, and within reach of the majority of firemen.

Many fire companies have been setting such standards for a number of years. The Brewerton Volunteer Fire Department developed officer qualifications five years ago and have found them to be very successful. The line officers are elected annually and the department secretary rules on the eligibility of each nominee. To be eligible for nomination officer candidates must meet the following requirements:

Chief:

Must be a graduate of the basic, intermediate and advanced courses of the New York State Fire School program.

Must be a resident taxpayer of the fire district, at least 30 years of age.

Must have a fire alarm record of answering 100 or more calls.

Must have been an active fireman for 7 or more years.

Must have served two years or more as a junior line officer.

Assistant Chief:

Must be a graduate of the basic, intermediate, and advanced courses of the New York State Fire School program.

Must have a fire alarm record of answering 65 or more calls.

Must have been an active fireman for 5 years.

Must have served two years as junior line officer.

Captains and Lieutenants:

Must be graduates of the basic, intermediate, and advanced courses of the New York State Fire School program.

Must have fire alarm records of answering 35 calls.

Must have been active firemen for three years.

In reviewing the above requirements it will be noticed that certain qualities such as leadership ability, emotional stability, physical fitness were not included. Many of these desirable standards cannot be described in precise terms. Human traits vary greatly, and it is best to leave out intangibles when setting up a criterion of judgement.

However, just as there are characteristics with which we are not able to deal successfully, there are basics which should not be forgotten such as knowledge, (there is no substitute), and experience, (a line officer must have it .)

Many fire departments would find it difficult to qualify men for officer positions if basic requirements were made too strict. In such cases a sliding scale of qualifications could be arranged. Each year the standards should increase until the ultimate goal of selecting the best available officer material is reached.

Once a volunteer fire department has established officer requirements, many members will strive to qualify for desired positions. Aspirants will know exactly what is needed to be eligible for nomination. Thus competence level of the entire fire company will be improved.

(*For detailed information on officer selection, administration, organization and other important factors of volunteer fire department operation, consult the new (1954) edition of NFPA Standard No. 192 — "Volunteer Fire Departments for Rural and Small Community Service." Price 50 cents per copy. Write to NFPA Publications Department, 60 Batterymarch Street, Boston 10, Massachusetts. — Ed.*)

Making the Most of a Demonstration

AS reported in the December issue of FIREMEN, particular emphasis was given to flammable liquid fires in some State and Provincial training classes throughout the United States and Canada. Many county and regional schools and individual fire departments also conducted special classes in this subject, to develop confidence in fire fighters, and to practice efficient evolutions with standard fire department equipment.

One of the best of these fire department training sessions, recently reported to FIREMEN, concerned the activities of the Palos Heights, Illinois, Volunteer Fire Department, headed by Chief E. C. Kamper. The flammable liquid fire training was scheduled to close out Fire Prevention Week activities on October 9 and 10, but due to floods in the area and prolonged extra duty by the fire department, a week's postponement was necessary. A large crowd attended the public demonstrations on October 17.

Under the direction of Chief Kamper, fire fighters first showed how to use water and other extinguishing agents on rubbish, an exploding oil hot water heater, an involved oil furnace, and on the types of grease fires which could occur in kitchens.

Then, using a gasoline tank semi-trailer combination, in a 20 by 50-ft. pit, the fire department members developed special problems to simulate highway accidents. Several hundred gallons of fuel oil and gasoline were poured into the tanker and the pit, and a commentator informed spectators of what could be expected to follow fuel ignition.

Here's one of the tank truck fires during the 25 second "pre-burn" before volunteers moved in for extinguishment. Approximately 300 gallons of fuel oil and gasoline were used to provide fuel in the 20- x 50-ft. pit and the tank truck.

First the vapors escaping from the vents of the tank were ignited to illustrate the purpose of such pressure and heat relief mechanisms. Then the vents were closed to show how the fire could be extinguished by stopping oxygen supply.

Then three pit fires were started and extinguished in the following sequence.

Each fire was allowed to have a 25 second "pre-burn." For the first fire, two high pressure lines with fog nozzles were used, with nozzle pressures between 700 and 800 pounds, and flows of about 30 gpm. Extinguishment was completed in 1 minute and 40 seconds.

For the second fire, low pressure fog nozzles were used on 1½-in. lines. Nozzle pressures were estimated to be between 100 and 150 pounds with about a 60 gpm discharge. In this instance the fire was extinguished in 2 minutes and 12 seconds.

On the third fire, air foam hose streams were used, with two 600 gpm air faom nozzles operated at about 100 pounds nozzle pressure. Extinguishment was completed in 59 seconds.

Chief Kamper reports that many personnel from petroleum industries were present at the demonstrations, in addition to representatives of fire departments from nearby communities. Each fire fighting operation was conducted successfully as planned, thus providing a training operation to improve teamwork among members of the department and to demonstrate that effective results may be obtained through using standard fire department equipment in the proper manner.

Palos Heights volunteers attack one of the demonstration fires using two high pressure lines equipped with fog nozzles.

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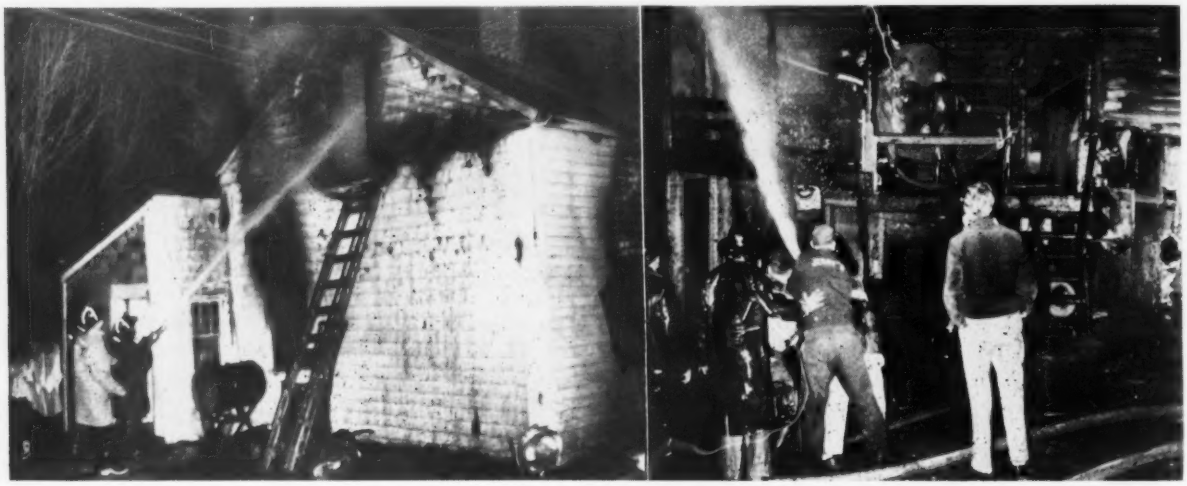
Fireground Impact!

TO MANY men the allure of fire fighting lies in the sudden, emotional changes which are experienced during the intensity of fireground action. No single volume could adequately describe all the fears, angers and irritations which today's fire fighters undergo in performance of duty. The pictures on these pages afford a sampling of fire action within a one-month period. Yet they provide ample proof to show that a fire fighter's character and nerve must be of such mettle that he can face the *quick impact of* . . .



Losing to death

. . . as in these two dwelling fires which claimed 10 lives. (*Left*) In Franklin, Massachusetts, on December 5, five children, aged 7½, 6, 4, 3 and 2 years, suffocated when fire blocked the stairs leading to their rooms. Fuel oil had leaked on the kitchen floor for an estimated 45 minutes before the vapors ignited, causing a flash fire. Fire fighters responding to a telephone alarm could not affect any rescues and had the "hollow victory" of "mopping up." (*Right*) In West Newton, Pennsylvania, on November 27, a blind grandmother, aged 93, and four of her grandchildren died in this dwelling after a kitchen stove exploded causing fire to spread through combustible fibreboard interior finish. Note hatless man carrying victim at left center of porch. . . . *Then there's the* . . .

Shock of collision

. . . as in this accident in Newburgh, New York, on December 3. A 1,000 gpm pumper collided at an intersection with a fuel oil truck tank just as the traffic lights had changed. Helmets in picture at left belong to two of the 6 injured fire fighters. Driver of the tank truck crawled through the flaming spill but later died of burns. Note extent of spill in photo at right. Seven other vehicles, trees, and overhead wiring were destroyed before extinguishment was made. Arrow in picture at right points to where smash-up occurred. . . . *Then there's* . . .

← Needless waste

. . . as in this estimated $522,000 fire in a department store, State College, Pennsylvania, on December 4. Apparently defective wiring started fire in a large supply of Christmas decorations on the first floor. Nearby paint and ammunition supplies led to a rapid spread throughout the unsprinklered 2-story wood and steel frame structure. A watchman telephoned the alarm but the building and an attached garage were destroyed, despite response of 5 engine companies, a ladder company and 2 rescue squads. . . . *And sometimes there's . . .*

No water to fight with →

. . . as in Plainview, Texas, on November 26. A brush fire spread to a cotton seed storage house, then, aided by a strong wind, spread to involve 141 loaded trailers, ginned cotton and other equipment. Since the fire scene was beyond the water main area in northeast Plainview, the cotton and equipment burned to destruction during the next 12 hours. . . . *Then there's . . .*

← The gentle rescue

. . . as in this photo showing Boston, Massachusetts, fire fighters in action on November 16. When a 4-story brick tenement building became involved by fire this expectant mother was carried down parallel ladders by two fire fighters. *And finally there's the . . .*

Biggest triumph →

. . . of watching life come back. In Boston on November 17, this youngster and his mother were overcome by gas fumes. The mother telephoned an alarm before she collapsed. Rescue squad members responding worked for a half-hour before revival of both was accomplished. Fireman John J. Mullen is holding face-piece while Fireman William Desmond receives that welcome tribute of the moving hand.

Photo Credits. Page 14, top and bottom left — *United Press.* Top and bottom right — *Wide World.* (Above to bottom right) — *Wide World, Associated Press Wirephoto, United Press,* and *Wide World.*

WINTER WARNING

Clearing the way in winter traffic with a siren only, is like trying to buck through an unplowed road.

FEDERAL's famous BEACON RAY LIGHT

is the *year 'round* warning signal!

When snow muffles sound, when car windows are tightly shut, only the Beacon Ray can penetrate, can get attention! Don't struggle through any more bad weather without its protection. Don't postpone its purchase — you need it — NOW!

Enthusiastic users will tell you that there isn't *any* warning signal that can beat the Beacon Ray for emergency vehicle use. *SPECIFY* the famous Beacon Ray light and the powerful Class Q coaster siren on your new fire trucks. Write us today for descriptive literature.

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Safety Clothing for FIREMEN

The *Original* STRIPED SAFETY COAT

The striped safety coat for firemen is an *original* MIDWESTERN development . . . featuring highly visible yellow stripes which are *rubberized as part of the material* . . . not painted, glued or sewed on!

Service records prove that Midwestern Striped Safety Coats withstand years of rugged duty . . . offer high safety visibility during the entire life of the garment. There are many imitations but *no substitute* for the workmanship, built-in comfort and longer wear you receive by specifying MIDWESTERN.

MIDWESTERN LEADS IN QUALITY

Superior quality, advanced design, exclusive fabric materials and safety features have made Midwestern a leader in the field of firemen's safety clothing. For complete information on our full line, see your Midwestern dealer. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

"Fire Protection Yearbook"

THE 15th edition of the "Fire Protection Yearbook" has been published by Benn Brothers Limited, Bouverie House, 154 Fleet Street, London EC4, England. This is a useful publication for anyone desiring information on the fire service in the British Commonwealth and Empire, since it offers a directory of all public fire brigades and salvage corps in the British Isles. A section also provides a directory of industrial and private fire brigades; another portion is devoted to civil defense authorities and their officers; while other sections of the book give particulars of organizations and societies interested in, or connected with, fire fighting and fire prevention; legal aspects of fire safety; fire engineering and essential statistics.

This 1955 edition also has lists of suppliers of fire equipment, trade names, and a desk diary.

Further information may be obtained by writing to the publisher.

"Jet" Propelled Rafts

BRITISH fire fighters recently demonstrated a novel fire fighting unit which could be used for shore-line fire fighting, such as in dock areas, along rivers and on lakes. The unit consists of three rafts, each having three gas turbine portable pumps. The rafts are trucked to the water's edge and lowered by crane. Once afloat, they are propelled by the discharge of a solid stream from one of the pumps into the water. When the attack position is reached all three pumps can draft water to supply hose lines or larger pumps on shore.

Another Gas Turbine Milestone

Photo at right shows Solar's first gas turbine driven aircraft generator set to be installed in a Douglas C-124C transport. The unit has just been removed from the plane after completing 500 hours of trouble-free operation. No servicing other than normal maintenance was required during this time, proving again the reliability of the Solar "Mars" gas turbine engine.

Solar pump on test at Navy Firefighting School

Portable fire pumps of the future will be powered by small gas turbine engines

THE IDEAL PORTABLE FIRE PUMP would be a unit of large output, light weight, small size, quick starting and easy maintenance. These ideal specifications are fully met for the first time by a new type of portable pump, powered by the Solar "Mars" gas turbine.

This portable fire pump of the future has been developed by Solar for the U.S. Navy Bureau of Ships. It delivers 500 gallons per minute at a pressure of 100 psi with a 16 ft suction lift. Dry weight, excluding fuel tanks and hoses, is only 175 lb. The unit is hand cranked and ready for full load in 15 seconds. It can pump its own weight of water in 2.5 seconds.

The Solar Mars gas turbine engine, prime mover of this unit, weighs less than 100 lb, is smaller than a 2-ft cube, and produces 50 hp using gasoline, diesel oil or kerosene as fuel.

Fire chiefs and other authorities both here and abroad have tested the Solar fire pump and given it their endorsement. It is not yet generally available because all current production of Solar gas turbines is going for military uses. However, production for commercial applications is expected in the near future. May we have your inquiry?

SOLAR AIRCRAFT COMPANY — SAN DIEGO, DES MOINES

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Solar specializes in the manufacture of precision products from alloys and special metals for severe service. Solar's experience since 1927 is unduplicated in this field. Solar skills and facilities range from research, design and development through to mass production. Wherever heat, corrosion or difficult specifications are problems, Solar can help you solve them.

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Current orders include aircraft engine and airframe parts, alloy castings, pneumatic ducting, atomic energy components. Customers include some of the most honored names among aircraft and industrial companies in the U.S. and Europe.

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Bellows. *"Sola-Flex"® bellows and expansion joints in many designs from ½ in. up to the world's largest, 28 ft in diameter.*

Gas Turbines. *Solar "Mars" 50 hp engines for auxiliary generator sets, ground carts, portable fire pumps; Solar "Jupiter" 500 hp engines in variable and constant speed models.*

Ceramic Coatings. *"Solaramic"® is the Solar trade mark for a family of coatings that protects metals from heat, corrosion, galling and abrasion.*

Controls. *Complete control systems utilizing the new Solar "Microjet"® principle for control of gas turbines, jet engines and pneumatic devices.*

FURTHER INFORMATION
Your inquiry regarding any Solar product or service will receive prompt attention. Address Solar Aircraft Company Department A-59 San Diego 12, California

Some Headaches of a

Chief of Staff Division

A NUMBER of fire departments have a deputy or assistant chief in charge of staff functions with the specific job of coordinating such activities as maintenance and training. We have set down some possible examination questions based upon actual problems that such a chief officer must deal with.

It is fundamental that a top executive position, such as Chief of Staff Division, requires a high degree of individual judgment and initiative. His job is no longer merely a matter of carrying out orders in conformity to a rule book, or of solving a "hydraulic problem" to find a definite mathematical predetermined value. Top staff command functions require chief officers capable of discriminating judgment, who are able to weigh advantages and disadvantages in any situation or problem; men with informed opinion who are open minded for new and improved methods and techniques. (*For a series of questions concerning a Chief of a Fire Prevention Bureau, see* FIREMEN *for December, 1954.*)

1. You are directed to procure 10,000 ft. of best grade Dacron filler, cotton rubber-lined fire hose. Outline the complete procedure you would follow including performance characteristics you would want and important factors to be covered in the specifications and acceptance tests.
2. You are asked to suggest a plan for the more advantageous location of fire stations and fire companies in your city. List all of the various factors that would have to be considered in the development of such a plan.
3. It is your job to organize a program of dwelling inspections to be carried out by fire companies. State how you would conduct such a program by preparation of a general order giving detailed instructions to the fire companies.
4. The department has an appropriation of $65,000 for three new pumping engines. You are to suggest features that you feel should be included in the new specifications to improve the operating efficiency of the apparatus. Describe also how you would go about securing competitive bids from various manufacturers and what tests you would require the new apparatus to meet.
5. A rating system is proposed for your department whereby company commanders would make individual efficiency ratings on company members, giving the highest man 95, the next highest 90, the next 85, the next 80, and all other satisfactory members 75. You are to make a report giving your reasons for or against the acceptance of such a rating system.
6. You are assigned the task of organizing and equipping a new rescue company for your department. You will be responsible for building and equipping a rescue truck, and selecting and training the men. Write a report stating in detail how this matter would be handled.
7. You are to select and procure new 1½-in. and some larger-size fog nozzles for use with heavy streams. Relate in detail the factors that would govern your choice of this equipment and how you would conduct tests of such equipment.
9. Suggest a workable routine apparatus maintenance program for your department outlining the responsibilities of the apparatus drivers or operators, responsibilities of the maintenance or apparatus division, the daily, weekly, and monthly routine to be followed and the type of reports and records you would want kept.
10. You are to direct your firemen's training division to prepare new standard evolutions for placing ladder pipes in service. List as many factors as you believe to be pertinent to the problem of effective training in the operation of ladder pipes.
11. Several ladder companies in your department have wooden aerial ladders purchased before 1936 and one has a metal aerial obtained in 1941. State your recommendations for determining the safety of these ladders and the authority behind these recommendations.
12. Outline a training course for company officers in your department. The course will require one day per week for twelve weeks. List the subjects that you would include, the approximate time that you would devote to each and indicate how you would select your speakers.
13. Assuming that it has been several years since new assignment cards have been prepared in your department suggest revised running card plans for manufacturing, mercantile and residential districts in your community, indicating the type of response that you would have for 1st, 2nd, and 3rd alarms, the reason for this response, and how you would provide coverage for simultaneous or subsequent fires.
14. Assuming that your department has a water tower apparatus that is over 40 years old and is costing $30,000 a year to man. This equipment needs replacement if it is to provide reliable service. List facts that would be considered when deciding whether to buy a new water tower or rely on ladder pipes on aerial ladders.
15. What qualifications would you look for when selecting training officers for your department? What type of previous training and experience would you consider valuable when making your selection?

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Write for complete details
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How One Fire Department Uses "Sparky"

From a report by Captain Walter W. Shaw, Downingtown, Pennsylvania, Fire Department

TO MAKE fire prevention education a little more appealing to our school children, the Downingtown Fire Department has been using a live "Sparky," following the suggestions of the NFPA and the Advertising Council, who are sponsoring the national, year-around "Sparky" campaign.

During Fire Prevention Week of 1953 our department distributed "Sparky" coloring books to all children in the town's elementary schools. However, we could not evaluate the effect of this comic book until the following week when our apparatus was on display during a Pennsylvania Week parade. Our pet Dalmatian dog, "Del" was riding on one of the pumpers, standing on the hose rack with her paws on top of the cab. It was very encouraging to hear the school children call out "There goes Sparky!" and realize that they were learning to associate the dog symbol with fire prevention.

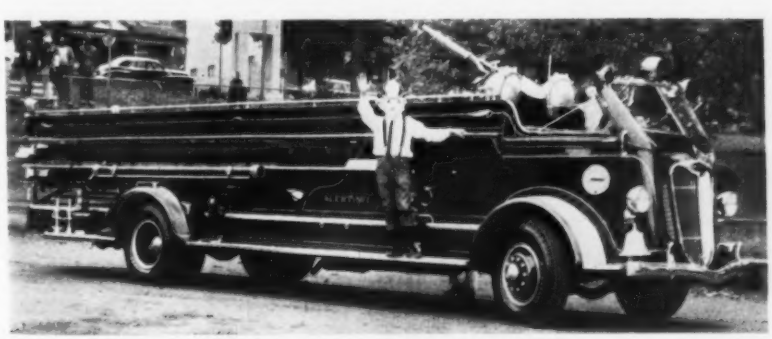
When 1954's Fire Prevention Week was about to start a group of students asked permission to give a fire prevention play in Downingtown's High School. This provided an opportunity to use a person for "Sparky." Mrs. Edward Shaw of West Chester created a large "Sparky" head of papier mache and a cast of characters was selected to present the play. There was the errant apartment house dweller; his right hand man who served as "comedy relief"; the Fire Chief; a commentator; the "Sparky" personality, and a group of fire fighters.

Despite the fact that some of the students had never acted before, the play was staged with great success at two high school assembly programs. School officials and fire officials were surprised and pleased at the manner in which it was presented and the effect it had on the student audience. The students not only appreciated receiving fire prevention education in such a manner, but those who actually participated in the play are still enthusiastic and are looking for new audiences and new ways for delivering a fire prevention message.

From using "Sparky" in this play and as a supplement to our regular fire prevention activities, the Downingtown Fire Department has found the symbol an effective means for catching the public's eye, and that the variety of means of using the symbol depends only upon the imaginations of the fire fighters.

(For information on how "Sparky" is used on a wide basis in Los Angeles County, California, refer to the NFPA Quarterly for October, 1954 — Ed.)

(Left) Downingtown's "Sparky" personality chides one of the characters who has violated principles of fire safety in the specially prepared play for high school audiences.



The use of "Sparky" on Downingtown's apparatus during parades impressed even visiting fire fighters. This picture was taken in Coatesville, Pennsylvania, and forwarded to FIREMEN by Assistant Chief William N. Schwartz ,Ocean Grove, New Jersey, Fire Department.

Sparky's Fire Department

MORE than 5,000 children have already applied for membership in "Sparky's Fire Department," which was first announced in the October, 1954, issue of FIREMEN magazine. Another advertisement of this new campaign may be found on pages 30 and 31 of this issue.

It is important to remember that "Sparky's Fire Department" is operating continually throughout the year. It is designed to supplement fire prevention activities of fire departments, even if they already have junior fire brigades or similar organizations. To get membership in Sparky's department, children have only to send 25 cents and their name and address to the address indicated in the advertisement. Membership cards then must be signed by fire fighters in the children's communities.

Honors to Chief Thomas

The following item is taken from one of the British fire magazines:

"Anglo-American friendship was further strengthened at the conferences of the Institution of Fire Engineers and the Chief Fire Officers Association at Torquay from September 27 to October 1, 1954, when Chief Henry G. Thomas of Hartford, Conn., as President of the International Association of Fire Chiefs, and a Vice President of the National Fire Protection Association, became the first honorary member of the Chief Fire Officers Association. The Institution of Fire Engineers honored Chief Thomas as well by adding his name to their roll of honorary members. The announcement of Chief Thomas' appointments was received with an enthusiasm never before witnessed at a fire service conference."

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SPECIFY "SENSIBLE" LUG COUPLINGS ON YOUR NEXT HOSE ORDER

POWHATAN BRASS *and* **IRON WORKS**
RANSON, WEST VIRGINIA
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3 WORKHORSES for YOU
With Amazing Performance

HALE Portable Pumping Units

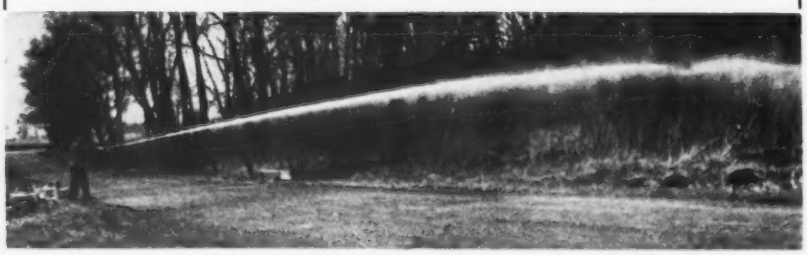
	U. S. Gallons Per Minute	*Disch. Press. Lbs. Per Sq. In.*
FZZ	60 100	90 70
FZ	50 300	60 10
HPZZ	15 50	200 100

These 3 pumping "Workhorses" provide amazing volumes and pressures for efficiently fighting a great variety of fires. All three units are conveniently portable by two men; can be easily mounted or carried on any type of apparatus for fighting fires while in motion from booster tank; often used to pump from inaccessible water source into major pumper, or to fight fires direct.

Write today for Circulars on Models FZZ, FZ and HPZZ—at least one of which is sure to meet your fire fighting requirements. Ask for demonstration; no obligation.

Fire Pumps in All Standard Capacities

HALE FIRE PUMP CO.
Conshohocken, Pa.



CD Fire Conference

ABOUT 100 representatives from fire departments and civil defense agencies of communities in the southeastern states attended a civil defense fire conference sponsored by the regional office of the U. S. Federal Civil Defense Administration at the Municipal Auditorium, Atlanta, Georgia, on November 4 and 5. Among the speakers were Chief Lloyd Layman, Director of the Fire Office, U. S. Federal Civil Defense Administration, and NFPA Chief Engineer Horatio Bond. The Atlanta Fire Department, C. C. Styron, Chief, assisted in the arrangements for the conference.

"Hashmark" Record?

THE New Ulm, Minnesota, Fire Department has posted a claim for a longevity service record. Seems that three of its members have served as active fire fighters for a total of 176 years.

Longest stretch of service in the department is claimed by former Chief Fred Pfaender, who began as a fireman in 1887 and is still serving after 67 years. Now his activities are limited to riding a pumper to a fire and policing crowds, although he still serves in the various fire department committees.

Alfred Schroeck joined the department in 1895 and has served for 59 years, 56 of them in the capacity of department secretary.

Shortest service of the three is claimed by "Rookie" Henry C. Groebner, who joined in 1904 and has now served for fifty years, including a number of years as Chief of Department.

Fire Officers' School

THE Southern Wisconsin and Northern Illinois Firemen's Association will hold its first Fire Chief's and Officers' School in the Elks Club, Madison, Wisconsin, January 17–20. Host for the school will be Chief Edward Page of the Madison Fire Department. Emmett Cox and Harry Wolff of the Western Actuarial Bureau, Chicago, Illinois, will serve as instructors for the 18-hour course.

Further information may be obtained from Norton T. Ames, President, Southern Wisconsin and Northern Illinois Firemen's Association, Oregon, Wisconsin.

Manual of Radio Procedure for the Fire Service

THE International Association of Fire Chiefs with headquarters at the Hotel Martinique, New York 1, N. Y., recently issued a booklet under the above title. It presents recommendations for radio procedure designed for the guidance of persons responsible for fire service communications and for fire department personnel using radio. The 6 x 9-in. booklet, 16 pages, was prepared by the IAFC Committee on Communications headed by Roi B. Woolley, Assistant Editor of Fire Engineering Magazine. Other members of the committee include Chief Joseph Giammatteo of Glen Echo, Md.; Fire Marshal William J. Scott of Toronto; Chief William Fitzgerald of Seattle; Warren Y. Kimball, NFPA, Boston; Deputy Chief Thomas P. O'Brien, New York Fire Department; Chief Stuart Potter of Greenwich, Conn.; George J. Richardson, International Association of Fire Chiefs, Washington, D. C.; George Swan, National Board of Fire Underwriters, New York; Chief Wayne E. Swanson, Rockford, Illinois and Chief Fred Wells, Fargo, North Dakota.

The text was reviewed by representatives of International Municipal Signal Association; International Association of Fire Fighters; National Board of Fire Underwriters; and the National Fire Protection Association Committee on Signaling Systems and Thermostats.

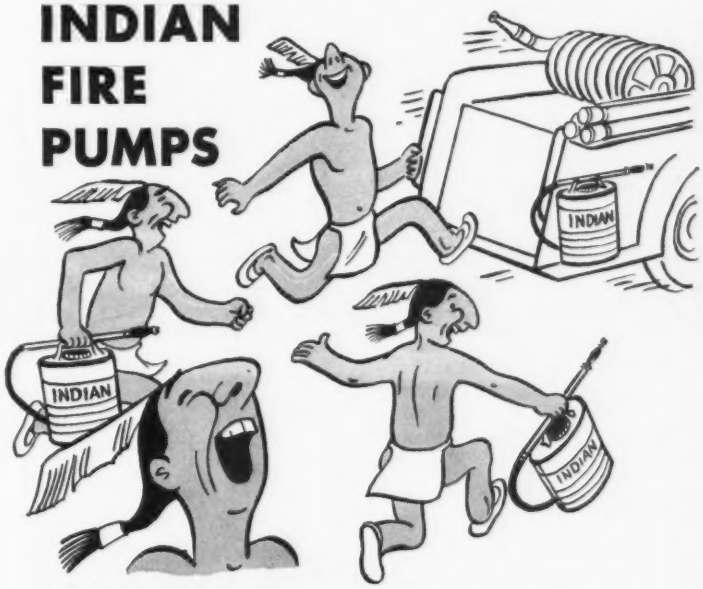
The manual deals with such matters as the phonetic alphabet, pronunciation of numerals, good radio speech, code words and signals, message priorities, instructions for dispatchers, instruction for mobile station operators, reports of radio equipment defects and maintenance of radio facilities, and includes suggested forms for radio messages.

Description is included covering the essentials of good radio messages. Corrections, cancellations, repetitions and verifications of messages are discussed, and there is an analysis of the differences between "urgent" and "routine" messages.

The Appendix includes a list of frequencies available to the fire service in the U. S. and definitions of limitations taken from FCC Rule 10. The publication is available from the IAFC at 75c per copy.

Trucks without
INDIANS
are like ham without eggs!

COMPLETE YOUR EQUIPMENT WITH
INDIAN FIRE PUMPS



INDIAN FIRE PUMPS are approved by Underwriters' Laboratories. When you choose an INDIAN you select the BEST!

"Choice For Quality The World Over"

More and more new apparatus is coming through with INDIAN FIRE PUMPS mounted as standard equipment. There are good reasons why so many fire protection agencies insist upon having these *"one man fire depts."* on their trucks.

Enjoy the time and effort saving advantages which come from having INDIAN FIRE PUMPS available for all class "A" and many class "B" fires and small oil fires.

Fire Chiefs tell us that "INDIAN FIRE PUMPS *alone* will handle 40% of their calls and are worth their weight in gold."

Put INDIANS on your present trucks — specify them to be installed on new trucks.

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Better Hose Care---
with CIRCUL-AIR

Circul-Air Dryers have passed the Approvals Tests and are listed by the Underwriter's Laboratories, Inc., Chicago and the Canadian Standards Association.

THE AIR CONDITIONING
FIRE HOSE DRYER

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. NO OTHER DRYING METHOD IS SO FAST—SO ECONOMICAL—SO EASY TO USE.

ACCEPTED • APPROVED • RECOMMENDED

ACCEPTED as the standard drying medium in over 1500 fire departments — APPROVED by the leading testing laboratories — RECOMMENDED by fire hose manufacturers and Fire Chiefs "all over America."

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If you are building, send for free copy of "Fire Station Design"

NEW HOSE DRYING MANUAL TELLS HOW TO DRY, STORE AND CONSERVE FIRE HOSE

May we send you one?

THE CIRCUL-AIR CORPORATION

575 East Milwaukee Detroit 2, Michigan

Friction Loss in Small Hose

(*Continued from page 8*)

hose can deliver only 24.5 gpm through the same length of line. This data tends to confirm observations by other authorities that 1½-in. hose lines of 250- or 300-ft. length preconnected to a pumper are readily capable of at least 125 gpm discharge, indicating that where water supplies are ample, the 1½-in. lines can discharge more than twice the 50 gpm volume formerly associated with this size of hose. Thus two 1½-in. leader lines with properly selected nozzles have, in effect, become equivalent in volume to a single 1⅛-in. nozzle tip, with the added advantage of greater mobility, better control of the lines, and a dual attack. In fact, it has been demonstrated that the equivalent to a ⅞-in. nozzle tip can be supplied with 1½-in. leader lines where proper pump pressure is applied.

Some of the largest fire departments are extending their 2½-in. lines indoors with 1½-in. leaders having large flow nozzles. This gets the maximum effectiveness from available manpower.

"Fire Chief"
Flame-Proof
Fire-Fighting
BROOM
$3.50 each
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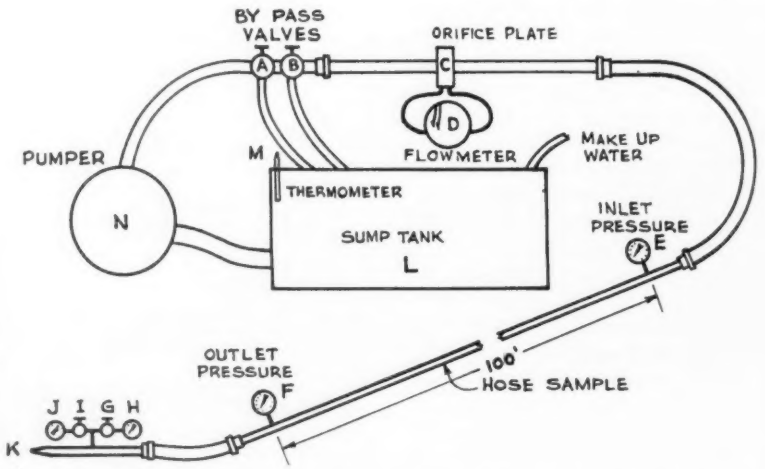
Allowable GPM Flow in HOSE with 250 PSI Pump Pressure and 100 PSI
(Based on 150 PSI Friction Loss in Hose)

Hose Size (Inches)	Straight Hose Lay in Feet				
	100	250	500	1000	1500
1½	—	156	100	70.0	56.0
1	—	55	37.5	26.0	21.0
¾	37.0	24.5	17.5	12.0	10.0
½	14.5	9.0	5.8	4.0	—



Here's the arrangement of equipment used at the Arcadia Equipment Development Center for measuring friction loss in small hose. Symbols J and H indicate gages for measuring nozzle pressures; I and G are gage selector valves; and K is the nozzle.

One Hand Operation! Easy-to-handle Rockwood WaterFOG nozzle is made of aluminum alloy, weighs only 5 pounds, 5 ounces. Nozzle design reduces reaction to a minimum.

Boy puts out raging fire

The fuel oil test fire above was extinguished in a matter of seconds by a 12-year-old boy — thanks to remarkable Rockwood firefighting equipment.

By using a lightweight, 10-foot applicator, he was able to approach the fire safely as low velocity Rockwood WaterFOG was discharged through the applicator, quenching flames, choking off oxygen and cooling the surrounding area thus preventing "flash back."

Rockwood WaterFOG is the result of discharging water through a specially engineered Rockwood nozzle that breaks water into tiny particles which burst into a blanketing mist of steam that smothers fire. The Nozzle shown in use here is a 1½" Type SG 48. It can also discharge high velocity WaterFOG, and straight water stream. Available for ¾", 1", 1½" and 2½" fire hose sizes.

Plan to make this and other Rockwood firefighting aids part of your team.

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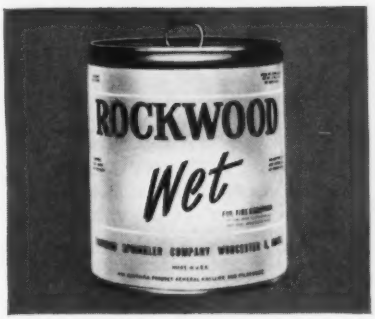
Rockwood Double Strength Foam Liquid, 3 parts mixed with 97 parts water, forms a quickly re-sealing, solid FOAM blanket or a highly heat absorbent FogFOAM pattern — depending on the Rockwood equipment used to discharge it. Available in 5-gallon cans or 50-gallon drums.



Rockwood Wet, 1 part mixed with 99 parts water, increases penetration and extinguishing action of water. Excellent where fire is deep seated or where water is scarce. Helps reduce amount of time and manpower required. Available in 5-gallon cans or 50-gallon drums.

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Company.....

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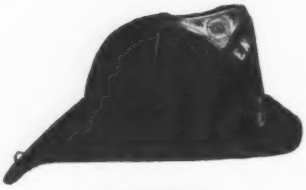

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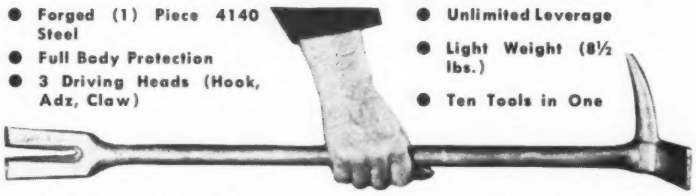

Hook: Used to — Make Holes in Floor or Ceiling, Remove Locks, Hasps, Staples.

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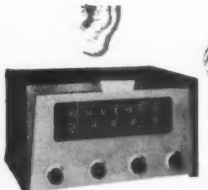

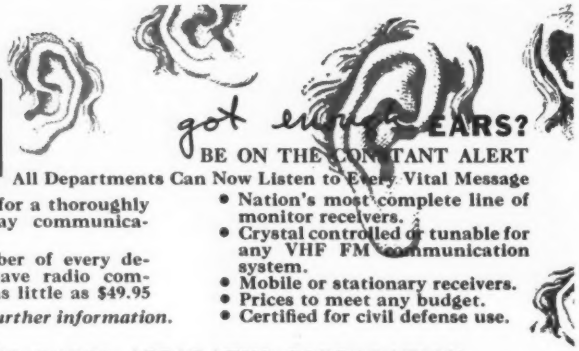

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Membership Report

HEADING the list of new NFPA Fire Department members below, is the "Hosekinkers Rescue and Protection Squad," a small fire department in Chugiak, Alaska. Which brings to mind the thought that FIREMEN magazine has rather unique distribution to both large and small fire departments in many parts of the world. The fire service topics which it reports apparently have far-reaching effects because they are generally the "problem" topics which confront fire departments all over the world.

During the past few months items and full-length articles which first appeared in FIREMEN have been reprinted, with permission, in Italian, French, British and Japanese periodicals and a request for such reprint permission has just been granted to an organization in Sydney, Australia.

Actually, of the 30,000 copies of FIREMEN which are mailed each month, only slightly more than 2,400 are mailed to fire departments and other fire service organizations in "foreign" countries, which have membership in NFPA. However, the fact that articles are interpreted and printed in appropriate languages adds greatly to the circulation of ideas and news.

Which all goes to show that the accomplishments which are reported in FIREMEN, put the individual or fire department concerned "on review" before "the eyes of the world."

NFPA Welcomes:

Alaska: Hosekinkers Rescue and Protection Squad, Chugiak.

Alberta: Medicine Hat Fire Department, Medicine Hat.

British Columbia: Castlegar Volunteer Fire Department, Castlegar; Brighouse Volunteer Fire Brigade, Vancouver; Rutland Fire Brigade, Kelowna.

Indiana: Perry Township Volunteer Fire Department, Indianapolis.

Maine: Scarborough Fire Department, Scarborough.

Michigan: Chief E. P. Bannister, Battle Creek Twp. Fire Department, Battle Creek.

Nebraska: Chief J. H. Mordhorst, Fremont Fire Department, Fremont.

New Jersey: Mountainside Fire Department, Mountainside.

New York: Menands Fire Company No. 1, Menands.

Washington: Chief M. E. Hunter, Island County Fire District No. 3, Clinton.

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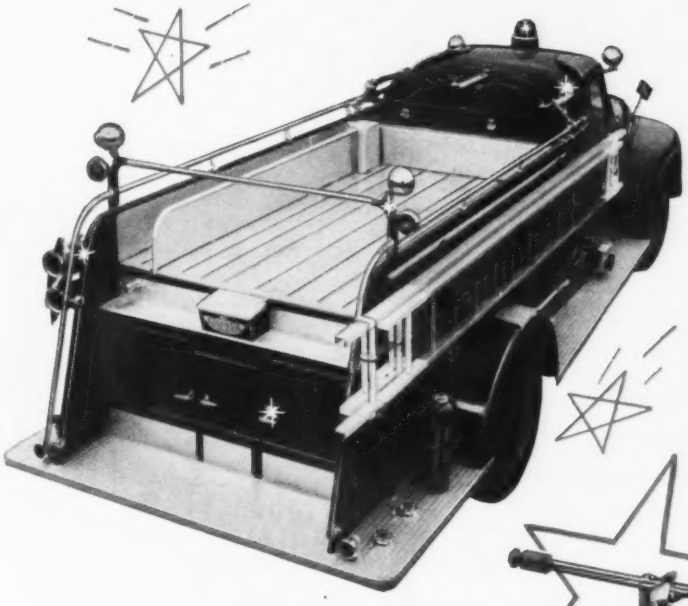

These pictures tell a story you can "read" without words! Examine them — or look over any piece of American Fire Apparatus. You'll see engineered features that sparkle with ingenious advanced design — that give you *exclusive, practical advantages in fire-fighting effectiveness.*

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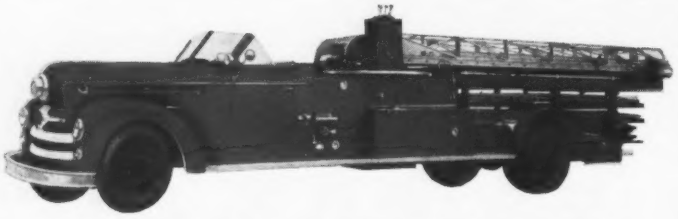
Farm Fire Protection in Maryland

A THOROUGH report on fire loss experience, fire protection and fire prevention measures on farms in Maryland has been published in a 40-page paper-bound bulletin by the Agricultural Experiment Station, University of Maryland, College Park, Md. Authored by Lydon C. O'Day and W. P. Walker, Bulletin No. 448 devotes sections to historical development of rural fire insurance rates in Maryland; fire protection measures in this state, including telephone service, types and conditions of roads and farm lands; water supply systems; exposure problems, and availability of fire extinguishers for each farm property. Other portions of the bulletin concern fire prevention measures for dwellings on farms and minor farm buildings, statistical data on fire prevention, including the comparison among geographical areas of the state, analyses of farm fires and a comparison and evaluation of fire protection of farms within and beyond four miles distant from any fire company.

Copies of Bulletin 448 may be obtained free of charge by any resident of the State of Maryland. Write to I. C. Haut, Director, Agricultural Experiment Station, College Park, Maryland.



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Fire Department Maps

(*Continued from page 11*)

maintenance crews, and personnel of the Bureau of Fire Prevention. Accurate portable book maps will prove of great value in this sprawling city of some 120 square miles, including finger canyons, hills, and dead end streets. Positive rerouting of radio equipped fire apparatus can be accomplished, especially where fire apparatus travel far beyond their regular assigned districts.

Other city departments have found copies of the map extremely useful. Installations have been made in the offices of the Street Division, Sanitation Division, Water Department, Police Department, and Office of Civil Defense.

The Fire Department's map revising program is exacting and never-ending. It has paid enormous dividends in fire safety to the city by minimizing erroneous emergency response, by standardizing fire lanes, and by improving the operating efficiency of the entire department.

Minnesota Fire School

THE 1955 Minnesota Fire School will be held April 25–29 at the University of Minnesota, Institute of Agriculture, Farm Campus, St. Paul, Minnesota. For further information and applications for the school write to Dr. J. O. Christianson at the Institute of Agriculture, or to Leonard C. Lund, Deputy Commissioner, Fire Marshal Department, St. Paul, Minnesota.

In 1955
Why not get a subscription to FIREMEN magazine for every man in your fire department?

Occupancy Fire Records

THREE new occupancy fire records have been prepared by the NFPA Fire Record Department and are now ready for distribution. Bulletin FR54-7 "Department Stores" contains 8 pages with illustrations and reports and analyses of important department store fires. Bulletin FR54-8 also has 8 pages and describes fire incidents in college dormitories, fraternities and sororities. Bulletin 54-9 contains 12 pages with similar analyses of food cannery fires. Each of these bulletins may be obtained for 50¢ per copy, with discount for quantity purchases.

As announced in the October issue of FIREMEN magazine the first 6 "Occupancy Fire Records" are available in a complete set which may be purchased for only $2.00, while single copies of any particular fire record may be obtained for 50¢ each. This set includes: FR54-1 Garages; FR54-2 Supermarkets; FR54-3 Foundries; FR54-4 oil burners; FR54-5 Grocery Warehouses; FR54-6 Farm Property.

Copies or sets of the bulletins may be obtained by writing to NFPA Publications Department, 60 Batterymarch St., Boston 10, Mass., or by using the convenient order form on this page.

"Sparky "Emblems

THE symbol of the Home Fire Prevention Campaign sponsored by the NFPA and the Advertising Council is now attractively featured on a complete line of jewelry items for the fire service. A 1-inch high facsimile of "Sparky in bright red, blue, and black appears on cigarette lighters, (Evans and Zippo), money clips, tie clips, 14 K gold plated pencils, key chains, lapel pins, and cuff links. Write to Award Incentives, Incorporated, 200 William Street, New York 38, New York, for prices and further information on these unusual gift items.

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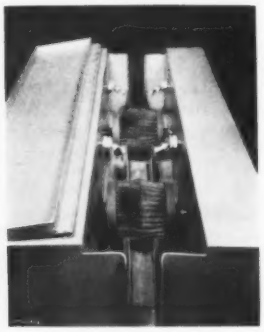
What's New in Fire Equipment, Catalogs and Bulletins

New Equipment Catalog

Powhatan Brass & Iron Works of Ranson, West Virginia, is distributing a new catalog list of all its fire protection equipment. The 8½ x 11 in. illustrated publication has 70 pages, together with descriptions of couplings, valves, fittings and other fire equipment. Copies may be obtained, free of charge, by writing to the manufacturer at the above address.



Fire Hose Washer

A new fire hose washer is now being distributed by the Circul-Air Corporation, 575 E. Milwaukee Ave., Detroit 2, Michigan, called the "Circul-Air A-Z Washer-Drainer." The new model contains waterproof nylon brushes through which fire hose may be passed in a constant flow of clean water from roto-jet spray nozzles. A by-pass valve permits a detergent to be introduced into the clean water for removing oil or grease spots on hose. Brushes of the machine are adjustable to compensate for wear. Descriptive literature on washers, cables and driers may be obtained at no charge from the manufacturer at the above address.

●

Be sure you have the new 32-page catalog on Braxmar Badges for the fire service. Write to *C. G. Braxma Co., Inc.*, 216 East 45th St., New York 17, N. Y., for their Diamond Jubilee Catalog. . . . A new 16-page illustrated pamphlet on John Bean Industrial In-Plant Fire Fighters — their complete line of high-pressure fog units — is free for the asking. Write to *John Bean Division, Food Machinery and Chemical Corp.*, Lansing 4, Michigan or San Jose 3, California.

Looking for an easy way to remove snow from your fire station driveway? An easy-to-operate, all steel plow with 30-inch by 12-inch adjustable blade that pushes snow to the left, right or straight ahead is now on the market. It is called Rid-O-Sno. For descriptive literature, write to *Leisure Industries*, Department B4596-09, Metropolitan Ave., Forest Hills 75, Illinois. . . . More and more fire departments in rural areas are adding Kohler Company portable electric generators to provide current for floodlighting their power tools, such as drills and saws. The Black River Fire Department in the town of Wilson, Wisconsin, recently equipped its truck with a 1½ kw Kohler electric plant supplying enough electric power to keep two heavy-duty floodlights in operation.

If you attended the I.A.F.C. Convention in Houston last October, you may have seen the Scott Hydro-Pak demonstrated. This new self-contained underwater breathing unit, made by the makers of Scott Air-Pak breathing equipment for indutsries and fire fighting, is designed to increase the scope of service of any fire or rescue group. Get complete information from *Scott Aviation Corporation*, 236P Erie Street, Lancaster, New York. . . . Have you seen the official "Sparky" fire hat, a recent addition to Sparky's Fire Department official badge, manual and inspector's card? Write to *Sparky's Fire Department No. 2 Headquarters*, 4111 23rd Street, Long Island City 1, New York. . . . Midwestern Mfg. Company, Mackinaw, Illinois, well-known manufacturer of firemen's protective clothing, has changed its name to *Midwestern Safety Mfg. Company.*

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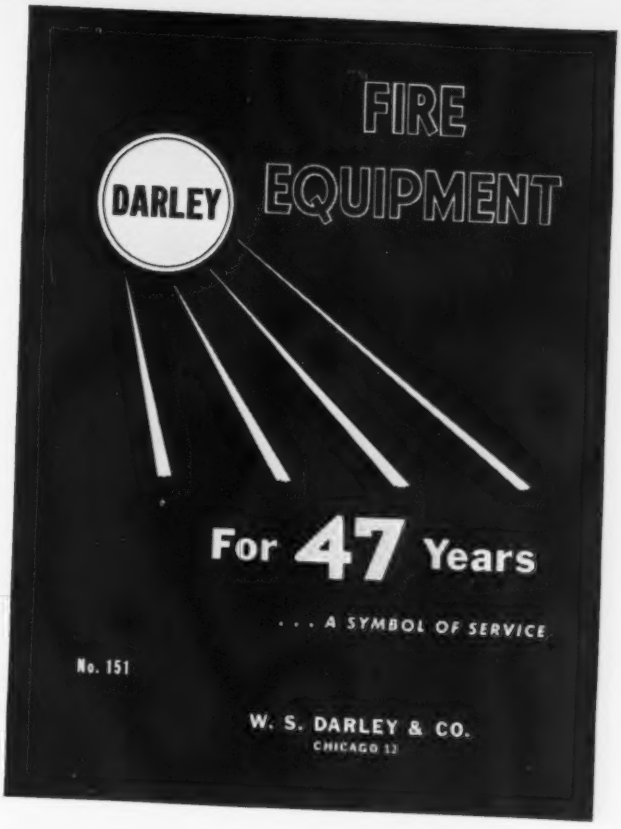

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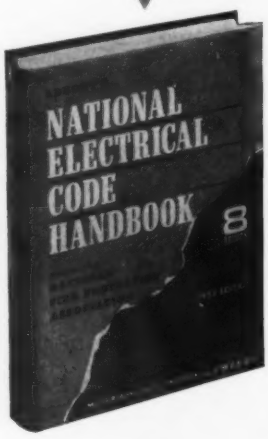

Based on the 1953 Code

642 pages, 394 illustrations, 5½ x 8 inches in size

Published by McGraw-Hill Book Co.

Revised by
Charles L. Smith
NFPA Electrical Field Engineer

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It will be especially useful to students of electricity, but "the man in the field" will also want it within easy reach. Many fire department members who are electricians and who must install and inspect electrical installations will find this handbook a very useful source for practical reference.

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